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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kazunari Era

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EXAMINER

TUCKER, WESLEY J

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

04/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,033	Applicant(s) ERA, KAZUNARI	
	Examiner WESLEY TUCKER	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-4-07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed January 14th 2008 has been entered and made of record.
2. Applicant has amended claims 18, 29 and 34. Claims 1-17 are cancelled. Claims 18-34 are pending.
3. Applicant's remarks in view of the newly presented amendments have been considered but are found unpersuasive for at least the following reasons:

Applicant argues that Murata discloses calculating depth information or a Z-value for each region and therefore does not disclose calculating depth information for each pixel. Examiner respectfully disagrees. Murata repeatedly discloses calculating parallax information for each predetermined unit area and repeatedly expresses that each predetermined unit area is an area consisting of one pixel, for example (column 7, lines 20-24, 30-35 and column 8, lines 45-48). It is clear that Murata is concerned with the perspective correction value on a pixel by pixel basis and is therefore still interpreted to read on the claim language as recited. The rejection in view of Murata is therefore maintained and accordingly made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 18-34 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,445,833 to Murata et al.

With regard to claim 18, Murata discloses a method for generating a stereographic image comprising:

a calculating step of calculating Z-values of each pixel based on pixels on image data for that pixel, the pixels forming an image, each Z-value being assigned to a pixel, and each Z-value representing a depth of an object corresponding to the pixel (column 7, lines 25-39);

an adjusting step of adjusting a Z-value of a target pixel obtained in said calculating step using a Z-value of at least one individual pixel other than the target pixel (column 7, lines 30-34 and 40-46); and

a generating step of determining an amount of displacement of a target pixel on the basis of an adjusted Z-value of the target pixel, and displacing the target pixel horizontally by the determined amount, to generate images for the right and the left eyes (column 7, lines 33-39).

Murata discloses a three step method as claimed for calculating parallax information for generating stereo images. The “perspective image characteristic value” is interpreted as the claimed Z-value. Applicant’s amendment to claim 18, directed to

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individual pixels does not serve to overcome the reference of Murata. Murata repeatedly discloses calculating parallax information for each predetermined unit area and repeatedly expresses that each predetermined unit area is an area consisting of one pixel, for example (column 7, lines 20-24, 30-35 and column 8, lines 45-48). It is clear that Murata is concerned with the perspective correction value on a pixel by pixel basis and is therefore still interpreted to read on the claim language as recited.

With regard to claim 19, Murata discloses the method of claim 18, wherein in said calculating step a Z-value of a target pixel is obtained by adding predetermined weights to color components of image data of the target pixel (column 35, lines 1-21).

With regard to claim 20, Murata discloses the method of claim 19, wherein the weights are determined based on the ratio of cone cells sensitive of R, G, and B, respectively, which cones exist in a retina of a human eye (column 35, lines 1-21).

With regard to claim 21, Murata discloses the method of claim 18, wherein in said adjusting step Z-values of pixels are adjusted so that a single step available for a Z-value of a pixel corresponding to an object located backward in an original image express deeper depth than a single step available for a Z-value of a pixel corresponding to an object located forward in the original image (column 7, lines 40-46).

With regard to claim 22, Murata discloses the method of claim 18, wherein in said adjusting step: tendency of Z-values of pixels in the image is analyzed by comparing a Z-value of a pixel within an area with a Z-value of a pixel within another area; and when a result of the analysis agrees with a predetermined condition, a quantitative relation between the amount of displacement of the target pixel and the Z-value of the target pixel is reversed in said generating step (column 10, lines 40-62).

With regard to claim 23, Murata discloses the method of claim 18, wherein in said adjusting step: an average of Z-values of pixels within an area which includes a target pixel is obtained; and a Z-value of the target pixel is replaced by the obtained average (column 35, lines 52-67).

With regard to claim 24, Murata discloses the method of claim 18 wherein in said adjusting step:

a distribution of the Z-values of all pixels in the image and an average of all pixels in the image are obtained; and deviation of the distribution is corrected using the obtained average (column 35, lines 52-67).

With regard to claim 25, Murata discloses the method of claim 18, wherein in said adjusting step:

at least one object in the image represented by the image data is identified referring to Z-values of pixels calculated in said calculating step; and a Z-value of the

target pixel is adjusted on the basis of a Z-value of a pixel located within an area corresponding to the identified object (column 34, lines 8-25).

With regard to claim 26, Murata discloses the method of claim 18, wherein in said adjusting step a step size of quantization of the Z-value is determined based on a value of a parameter specified by a user (column 7, lines 10-24). Murata discloses that the Z value or perspective image characteristic value is chosen from a selection of combinations of values. This selection must be made at some point in the operation of the device and that selection is interpreted as being user-specified.

With regard to claim 27, Murata discloses the method of claim 18, wherein in said adjusting step either an upper limit or a lower limit of the calculated Z-value is determined based on a value of a parameter specified by a user (column 7, lines 10-24). The limits of the calculated Z-value are determined by what is selected to represent and calculate the Z value or perspective image characteristic value.

With regard to claim 28, Murata the method of claim 18, further comprising a step of obtaining moving images comprised of a plurality of images, and wherein a stereographic image is generated from each image, to generate stereographic images corresponding to the moving images in real time (column 8, lines 49-67).

With regard to claim 29, the discussion of claim 18 applies. Murata discloses an apparatus for use in performing the method of claim 18 as discussed. With regard to the “means for” performing the steps of claim 18 (Fig. 51).

With regard to claims 30 and 31, the discussion of claims 26 and 27 apply respectively.

With regard to claim 32, Murata discloses the apparatus of claim 30 wherein the parameter represents a step size of quantization of the Z-value (column 7, lines 10-24). Murata discloses that the Z value or perspective image characteristic value is chosen from a selection of combinations of values. This selection must be made at some point in the operation of the device and that selection is interpreted as being user-specified.

With regard to claim 33, Murata discloses the apparatus of claim 30, further comprising: storing means for storing image data for the right and the left eyes; and displaying means for displaying an image represented by the image data stored in said storing means in compliance with a predetermined scheme (column 15, lines 62-67).

With regard to claim 34, the discussions of claims 18 and 29 apply. Murata discloses the method and apparatus to be implemented by a programmable computer product (Fig. 1).

Final Rejection

5. Applicant's amendment necessitated the grounds of rejection presented in the Office Action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WESLEY TUCKER whose telephone number is (571)272-7427. The examiner can normally be reached on 9AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wes Tucker/
Examiner, Art Unit 2624

/Matthew C Bella/
Supervisory Patent Examiner, Art
Unit 2624